REMARKS

I. Status Summary

Claims 1-15 and 43-55 are pending in the present application. Claims 1, 10-13, 43, 49, and 54 have been amended. Therefore, upon entry of this Amendment, Claims 1-15, and 43-55 will be pending. No new matter has been introduced by the present amendment. Reconsideration of the application as amended and based on the arguments set forth hereinbelow is respectfully requested.

II. Claim Rejections

Claims 1-15 and 43-55 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Specifically, the Examiner stated that claim 1 recites "in response to receiving the SS7 MTP network management message, generating a data network management message including at least some of the operating status information". (Official Action, page 2.) The Examiner contended that there is no disclosure in the specification of these features. (Official Action, page 2.) Independent claims 1 and 43 have been amended to delete the phrases "in response to receiving the SS7 MTP network management message" and "receiving a signaling system 7 (SS7) network management message signaling unit (MSU)," respectively. Therefore, applicants respectfully submit that the rejection of the claims is now moot because of the deletion of the phrases.

Applicants have amended claim 1 to recite "detecting a network management event regarding operating status of an SS7 node residing in the SS7 signaling network;" and "in response to detecting the network management event, generating a data

management message including information of at least some of the operating status of the SS7 node." Applicants submit that claim 1, as amended, is supported by the specification. An example of the process recited by claim 1 is provided at, for example, page 29, line 12, to page 32, line 6, and Figure 11. Specifically, referring to page 30, line 21, to page 31, line 1, a scenario is described where a node in an SS7 network fails or becomes inaccessible. SCP node **104** (Figure 11) experiences a signaling link failure that effectively isolates the node from all other elements in the converged network. (Application, page 31, lines 2 and 3.) Upon determination that SCP node **104** is unavailable, a signaling gateway (SG) **402** (Figure 11) generates an SS7 transfer prohibited (TFP) network management message and subsequently sends copies of the TFP message to other SS7 nodes in the network. (Application, page 31, lines 3-6.) In addition, SG **402** generates a related, IP-formatted, TALI- or SCTP-based point code unavailable (PCUA) message that is distributed to relevant nodes in the IP component of the converged network environment. (Application, page 31, lines 17-21.) Thus, SG **402** is capable of generating and distributing IP network management messages indicating the operating status of the SS7 nodes in response to detecting signaling link failure of the node, or a network management event regarding the operating status of the SS7 node. Applicants respectfully submit that the features of claim 1 are supported throughout the present application, particularly at page 29, line 12, to page 32, line 6, and Figure 11.

In addition, the features of claim 43 are similarly supported with the above example provided for claim 1. For these reasons, applicants respectfully submit that the rejection of the claims under 35 U.S.C. § 112, first paragraph, should be withdrawn.

The Examiner objected to the drawings under 37 C.F.R. § 1.83(a). The Examiner stated that the drawings do not show every feature of the invention specified in the claims. (Official Action, page 2.) The Examiner contended that the phrase "in response to receiving the SS7 MTP network management message, generating a data network management message including at least some of the operating status information" is not shown in the drawings. (Official Action, pages 2 and 3.) As previously stated, independent claims 1 and 43 have been amended to delete the phrases "in response to receiving the SS7 MTP network management message" and "receiving a signaling system 7 (SS7) network management message signaling unit (MSU)," respectively. Therefore, applicants respectfully submit that the rejection of the claims is now moot because of the deletion of the phrases.

Independent claims 1 and 43 have been amended and are believed to be supported throughout the present application as discussed above, particularly at page 29, line 12, to page 32, line 6, and Figure 11. Applicants submit that the drawing of Figure 11 along with its corresponding description sufficiently shows each and every feature of the invention specified in the claims. Therefore, applicants respectfully submit that the rejection under 35 C.F.R. § 1.83(a) should be withdrawn.

Claims 10-13 and 47-49 recite that detection of the network management event includes receiving various types of network management messages. Support for these claims is found, for example, on page 30, line 21 through page 33, line 17. This portion of the present specification recites that a network management message is detected SG **402**. According to this portion of the present specification **300** of SG **402** generates a TFP message. The TFP message is forwarded to eDCM **350**. eMCM **350** then sends

data network management messages to MGC **114**. Thus, from this example, eDCM **350** receives as SS7 network management message and generates a corresponding data network management message. Another example where receipt of an SS7 network management message triggers a data network management message is presented in Figure 17 where SG **402** receives a TFC message and generates a congestion level message to MGCs **112** through **116**. Accordingly, it is respectfully submitted that the claims that relate to receiving SS7 network management messages and generating corresponding data network management messages are supported by the specification.

III. Claim Rejections under 35 U.S.C. § 103

Claims 1, 2, 14, 15, 43, 44, 47-49, and 55 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,870,565 to Glitho (hereinafter, "Glitho") in view of U.S. Patent No. 6,731,741 to Fourcand et al. (hereinafter, "Fourcand"). This rejection is respectfully traversed.

Regarding claim 1, the Examiner contended that Glitho discloses all of the recited elements except for element (b). (Official Action, pages 3 and 4.) Further, the Examiner contended that Fourcand discloses element (b) and that it would have been obvious to one of ordinary skill in the art to combine Glitho and Fourcand to achieve the subject matter recited by claim 1. (Official Action, page 4.)

Claim 1 recites a method for use at a gateway node (such as signaling gateway **402** shown in Figure 11) in a converged telephony / data network environment (such as converged network **400** shown in Figure 11) for communicating operating status

information associated with nodes in a signaling system 7 (SS7) telephony signaling network (such as the SS7 signaling network shown in Figure 11) of the converged network to nodes in a data network of the converged network. Claim 1 has been amended to recite detecting a network management event regarding operating status of an SS7 node (such as service control point (SCP) **104** shown in Figure 11) residing in the SS7 signaling network. In addition, claim 1 has been amended to recited generating, in response to detecting the network management event, a data network management message indicating the operating status of the SS7 node. Claim 1 also recites sending the data network management message to nodes (such as nodes **112**, **114**, and **116** shown in Figure 11) in the data network (such as the IP network shown in Figure 11) that are adapted to communicate with the SS7 network. Such a method may be advantageous for improving the efficiency by which status information messages are communicated in a converged communication network environment.

Summarily, neither <u>Glitho</u> nor <u>Fourcand</u>, alone or in combination, discloses or suggests detecting a network management event regarding operating status of an SS7 node, generating a data network management message including the operating status information in response to detecting the network management event, and sending the data network management message indicating the operating status of the SS7 node to nodes in the data network, as recited in claim 1.

<u>Glitho</u> is directed to a data communications network for providing operation and maintenance services to a telecommunications network. (<u>Glitho</u>, column 1, lines 44-47.) Referring to Figure 1 of <u>Glitho</u>, a common channel signaling (CCS) network **10** includes a plurality of exchanges (X) **14** for providing circuit switched connections to voice trunks

16. (Glitho, column 2, lines 11-16.) Exchanges **14** are connected to a common channel signaling – signaling system no. 7 (CCS-SS7) network **12**. (Glitho, column 2, lines 22-31.) Network **10** also includes a plurality of signal transfer points (STPs) **18** operable to receive and transmit signaling messages between exchanges **14** and network **12**. (Glitho, column 2, lines 18-22.) The description of Figure 1 in Glitho provides no teaching or suggestion of detecting a network management event regarding operating status of an SS7 node residing in an SS7 signaling network, as required by element (a) of claim 1. Further, the Figure 1 description in Glitho provides no teaching or suggestion of sending a data network management message indicating the operating status associated with an SS7 node residing in the SS7 signaling network to nodes in the data network that are adapted to communicate with the SS7 network, as required by elements (b) and (c) of claim 1. Rather, Glitho generally describes transmitting signaling messages between exchanges **14** and network **12**. There is no disclosure of sending a data network management message indicating the operating status associated with an SS7 node residing in the SS7 signaling network to nodes in the data network that are adapted to communicate with the SS7 network. Thus, Glitho fails to teach or suggest receiving or sending operating status information as claimed. Moreover, Glitho fails to disclose or suggest generating the data network management message including at least some of the operating status of the SS7 node, as required by element (b) of claim 1.

In Glitho, the only type of traffic disclosed as being carried over the data network is Q3 maintenance traffic. (See column 3, lines 14-17 of Glitho.) The Q3 operation and maintenance carried in the data network of Glitho is distinct from SS7 network

management traffic. For example, in Figure 2, Glitho illustrates that SS7 network **12**, which carries SS7 network management traffic, is separate from telecommunications management network **32**. There is no suggestion or teaching by Glitho of transmitting SS7 node operating status information over a data network in response to an SS7 network management event. Thus, for these additional reasons, it is respectfully submitted that Glitho fails to disclose or suggest the features of amended claim 1.

Fourcand likewise fails to teach or suggest receiving or sending operating status information as claimed. The Examiner contended that the Abstract and column 3, lines 6-11, teach element (b) of claim 1. The Abstract of Fourcand teaches a telecommunications network environment **10** including a signaling server **20** accessible by maintenance interfaces **12** and network interfaces **14**. (Fourcand, Abstract, and Figure 1B.) Signaling server **20** includes a signaling link controller **83** that receives and processes signaling information received from network elements and other signaling servers. (Fourcand, Abstract.) Controller **83** extracts a data portion of the signaling information for message transfer part level two processing. (Fourcand, Abstract.) For additional processing, the data portion of the signaling information may be routed over an Ethernet switch **76** to another signaling link controller **83** or to a signaling services controller **99** for signaling connection control part processing. (Fourcand, Abstract.) Local number portability lookup and global title translation on the received data portion may be performed, and a return message generated in response to the signaling information. (Fourcand, Abstract.) Fourcand fails to disclose or suggest detecting a network management event regarding operating status of an SS7 node residing in an SS7 signaling network, as required by element (a) of claim 1. In addition, Fourcand

does not teach or suggest sending a data network management message <u>indicating the operating status associated with an SS7 node residing in the SS7 signaling network</u> to nodes in the data network that are adapted to communicate with the SS7 network, as required by elements (b) and (c) of claim 1.

<u>Fourcand</u> generally describes receiving and processing signaling information received from network elements and signaling servers. Specifically, <u>Fourcand</u> describes extracting a data portion of the signaling information and routing the data portion to a signaling link controller or a signaling services controller. There is no disclosure of <u>detecting a network management event regarding operating status of an SS7 node</u> residing in an SS7 signaling network. Thus, <u>Fourcand</u> fails to teach or suggest detecting or sending operating status information as claimed. Furthermore, <u>Fourcand</u> fails to disclose or suggest generating the data network management message including information of at least some of the operating status of the SS7 node in response to detecting the network management event, as required by element (b) of claim 1.

As previously stated, the Examiner refers to the description column 3, lines 6-11, of <u>Fourcand</u> in the rejection of claim 1. Referring to column 2, lines 33-40, <u>Fourcand</u> discloses maintenance interfaces **12** providing access to signaling server **20** for operations, administration, and maintenance functions. Other communications are further described with signaling server **20** from column 2, line 41, to column 3, line 11, <u>none of which convey SS7 node operating status information to IP nodes</u>. This description in <u>Fourcand</u> does not teach or suggest sending a data network management message <u>including information of at least some of the operating status associated with</u>

an SS7 node residing in the SS7 signaling network to nodes in the data network that are adapted to communicate with the SS7 network, as required by elements (b) and (c) of claim 1. Thus, this description in Fourcand fails to teach or suggest receiving or sending operating status information as claimed. In addition, Fourcand fails to disclose or suggest generating the data network management message including at least some of the operating status information, as required by element (b) of claim 1. For these reasons, it is respectfully submitted that rejection of claim 1 and dependent claims 2, 14, and 15 as unpatentable over Glitho in view of Fourcand should be withdrawn.

Claim 43 is rejected for the same reasons provided for claim 1. (Official Action, page 5.) Similar to claim 1, claim 43 recites (1) detecting a network management event regarding SS7 point code status for an SS7 node; (2) generating a data network management message that includes the SS7 point code status of the SS7 node; and (3) sending the data network management message to specified nodes in the data network that are configured to communicate with the SS7 node. Summarily, neither Glitho nor Fourcand, alone or in combination, discloses or suggests all of these features recited in claim 43.

As previously stated, Glitho discloses a data communications network for providing operation and maintenance services to a telecommunications network. (Glitho, column 1, lines 44-47.) Referring to Figure 1 of Glitho, a common channel signaling (CCS) network 10 includes a plurality of exchanges (X) 14 for providing circuit switched connections to voice trunks 16. (Glitho, column 2, lines 11-16.) Exchanges 14 are connected to a common channel signaling – signaling system no. 7 (CCS-SS7) network 12. (Glitho, column 2, lines 22-31.) Network 10 also includes a plurality of

signal transfer points (STPs) **18** operable to receive and transmit signaling messages between exchanges **14** and network **12**. (Glitho, column 2, lines 18-22.) The description of Figure 1 in Glitho provides no teaching or suggestion of detecting a network management event regarding SS7 point code status for an SS7 node, as required by element (a) of claim 43. Further, the Figure 1 description in Glitho provides no teaching or suggestion of generating a data network management message that indicates the SS7 point code status and for sending the data network management message to specified nodes in the data network, as required by element (b) of claim 43. Rather, Glitho generally describes transmitting Q3 OA&M messages between exchanges **14** and network **12**. As stated above, Q3 OA&M messages are not messages that convey to nodes in the data network the operating status of nodes in the SS7 network. There is no disclosure of detecting a network management event regarding SS7 point code status for an SS7 node. Thus, Glitho fails to detecting or sending SS7 point code status information as claimed.

Fourcand likewise fails to teach or suggest detecting or sending SS7 point code status information as claimed. The Abstract of Fourcand teaches a telecommunications network environment **10** including a signaling server **20** accessible by maintenance interfaces **12** and network interfaces **14**. (Fourcand, Abstract, and Figure 1B.) Signaling server **20** includes a signaling link controller **83** that receives and processes signaling information received from network elements and other signaling servers. (Fourcand, Abstract.) Controller **83** extracts a data portion of the signaling information for message transfer part level two processing. (Fourcand, Abstract.) Fourcand fails to disclose or suggest detecting a network management event regarding SS7 point code status for an

SS7 node, as required by element (a) of claim 43. In addition, Fourcand does not teach or suggest generating and sending a data network management message that includes information of the SS7 point code status of the SS7 node, as required by element (b) of claim 43. Thus, Fourcand fails to teach or suggest detecting or sending SS7 point code status information as claimed. Therefore, Fourcand fails to disclose or suggest each and every element recited by claim 43. For these reasons, it is respectfully submitted that rejection of claim 43 and dependent claims 44, 47-49, and 55 as unpatentable over Glitho in view of Fourcand should be withdrawn.

Applicants respectfully submit that the teachings of Glitho and Fourcand, either alone or in combination, do not teach or suggest each and every feature of the present subject matter, and therefore that Claims 1, 2, 14, 15, 43, 44, 47-49, and 55 are not obvious in view of the Glitho and Fourcand. Applicants therefore respectfully request that the rejection of Claims 1, 2, 14, 15, 43, 44, 47-49, and 55 under 35 U.S.C. § 103(a) be withdrawn and the claims allowed at this time.

Declaration Pursuant to 37 C.F.R. §1.131

In addition, applicants have executed and attached hereto a Declaration under 37 C.F.R. § 1.131 executed by all of the inventors that establishes a date of invention prior to March 31, 2000, the 35 U.S.C. § 102(e) date of Fourcand. As indicated in the Declaration and the attached Exhibit, applicants have produced documentary evidence indicating conception of the invention at least as early as October 11, 1999 and due diligence in reducing the invention to practice. The document in Exhibit A describes in detail the claimed invention of detecting SS7 network management events and

communicating status information associated with nodes in a signaling system 7 (SS7) telephony signaling network of a converged network to nodes in a data network of the converged network as disclosed and claimed in the subject application. The document in Exhibit A was created at least as early as October 11, 1999. In addition, the Declaration indicates that MTP Primitives feature, which embodies the claimed invention, was developed continuously from its conception date until it was actually reduced to practice.

Applicants respectfully submit that this document and the Declaration establish a conception date of at least as early as October 11, 1999, and due diligence in reducing the invention to practice as required by 37 C.F.R. § 1.131. Fourcand and the present application do not claim the same invention. Conception and constructive reduction to practice occurred in the United States. Thus, it is respectfully submitted that applicants have met the requirements under 37 C.F.R. § 1.131 to swear behind Fourcand. Accordingly, for this reason alone, it is respectfully submitted that the rejection of the claims as unpatentable over Glitho in view of Fourcand should now be withdrawn.

CONCLUSION

In light of the above amendments and remarks, it is respectfully submitted that the present application is now in proper condition for allowance, and an early notice to such effect is earnestly solicited.

If any small matter should remain outstanding after the Patent Examiner has had an opportunity to review the above Remarks, the Patent Examiner is respectfully

requested to telephone the undersigned patent attorney in order to resolve these matters and avoid the issuance of another Official Action.
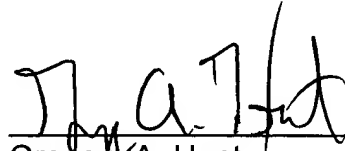
DEPOSIT ACCOUNT

The Commissioner is hereby authorized to charge any fees associated with the filing of this correspondence to Deposit Account No. **50-0426**.

Respectfully submitted,

JENKINS, WILSON & TAYLOR, P.A.

Date: April 7, 2005   By: _____

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